

Remarks

We hereby affirm the election of Group I, claims 1-11, for prosecution in light of the restriction requirement. The restriction requirement will not be traversed.

Claims 1-11 define an arsenic removal media comprising a mixture of an activated bauxite, aluminum trihydrate and ferric hydroxide, ferric oxyhydroxide and/or ferric hydroxyoxide. The claims 1-11 have been rejected as being obvious over U.S. Pat. No. 6,030,537 (“Shaniuk”) alone or in view of DE 4320003 (“DE ‘003”). While acknowledging that Shaniuk fails to teach or suggest the use of a ferric compound in conjunction with activated bauxite and aluminum trihydrate, the Office action alleges that such a combination would be obvious in light of (1) the journal article listed in column 1, line 19 of Shaniuk, whose title mentions aluminum and ferric hydroxides in conjunction with arsenic (V) adsorption; or (2) DE ‘003, which is alleged to teach that arsenic removal can be effected using supported ferric hydroxide.

We respectfully traverse the rejection of claims 1-11, because nowhere is the claimed combination of an activated bauxite, aluminum trihydrate and ferric hydroxide, ferric oxyhydroxide and/or ferric hydroxyoxide taught or suggested. Therefore, a prima facie case of obviousness has not been established because the requisite incentive for the claimed combination is absent. Nevertheless, if one accepts for the sake of argument that a prima facie case of obviousness has been established in the Office action, that prima facie case is rebutted by the Applicant because examples in the specification empirically demonstrate that the use of presently claimed combination of materials in an arsenic removal media produces a result that is not suggested anywhere in Shaniuk or DE’ 003, and thus is unexpected: significantly improved arsenic removal, even in the presence of competing ions, over the use of activated bauxite/aluminum trihydrate media in the functionally-important pH range of 6-7.

We invite the Examiner’s attention to page 10 of the present specification under the heading “Evaluation Results,” where evaluations comparing media in accordance with the present claims with media comprising activated bauxite and aluminum trihydrate alone, as described in the primary reference Shaniuk. The text and Figs. 1 and 2 demonstrate the surprising findings that the relative performance of the media is pH sensitive, and that the performance of the media in accordance with the present claims is significantly better in the 6-7 pH range, even in the

presence of competing ions. Fig. 1 shows that the media in accordance with the present Example 1 is vastly superior (15-20 percentage points better) to the comparative Shaniuk media in the 6-7 pH range. Fig. 2 shows that at pH 6.5 and in the presence of other common contaminant ions, which compete with arsenic for adsorption sites (see the description on page 3, lines 19-28 of the specification), the amount of arsenic (V) adsorbed per gram of adsorbent is approximately *ten times* greater for the Example 1 media than the Shaniuk media. We respectfully submit that these significant and surprising results rebut the alleged prima facie case of obviousness presented in the outstanding Office action.

In light of the foregoing, we respectfully submit that the pending claims clearly define a novel and non-obvious invention that fully merits patent protection. We therefore respectfully request that the application be allowed in its entirety at an early date. If there remain any issues that the Examiner believes may be resolved by discussion, we cordially invite the Examiner to contact Applicant's undersigned representative by telephone at any convenient time.

This Amendment is being filed after five months but within six months of the July 7, 2003 mailing date of the Office action. Authorization to charge the fee required for a three-month extension for response, as well as any other fee deemed to be required, to deposit Account No. 05-1070 is hereby granted.

Respectfully submitted,



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